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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/917,087

07/27/2001

Robert J. von Gutfeld

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07/07/2005

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EXAMINER

LANDAU, MATTHEW C

ART UNIT

PAPER NUMBER

2815

DATE MAILED: 07/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/917,087	Applicant(s) GUTFELD ET AL.	
	Examiner Matthew Landau	Art Unit 2815	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 May 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4,6,8,14 and 17-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17-23 is/are allowed.
- 6) ☒ Claim(s) 1-4,6 and 8 is/are rejected.
- 7) ☒ Claim(s) 14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 2815

## **DETAILED ACTION**

### ***Response to Amendment***

The declaration under 37 CFR 1.132 filed May 3, 2005 is insufficient to overcome the rejection of claims 1-4, 6, and 8 based upon US Patent 6,485,599 as set forth in the last Office action because: the declaration does not contain all of the required signatures (see MPEP 715.04 I).

### ***Claim Objections***

Claim 14 is objected to because of the following informalities: the limitation “to supply a UV dosage of not less than 0.02...” should be changed to “to supply a UV dosage of not less than ~~that~~ 0.02...”. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-3 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In regards to claims 1, 6, 18, and 20, the application as originally filed does not support the limitation “with a pulse duration greater than 21 ns”. While the specification states

Art Unit: 2815

the pulsed laser can have pulse widths “on the order of 10’s of nanoseconds” and that the range “can vary from femto-second to continuous wave” (page 5, lines 28 - page 6, line 6), these statements are not sufficient to support the specific range now claimed. The specification merely recites an extremely broad range. The fact that the claimed range falls within the broad range defined in the specification does not mean the narrow range of “greater than 21 ns” has support. Applicant has not provided any specific examples demonstrating the importance of the lower end of the claimed range (21 ns). Therefore, the aforementioned limitations constitute new matter.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4, 6, and 8 are rejected under 35 U.S.C. 102(e) as being anticipated by Glownia et al. (US Pat. 6,485,599, hereinafter Glownia).

Regarding claims 1 and 6, Figures 1A-3 of Glownia disclose a method for affixing two substrates (101 and 102) to one another, the method comprising the steps of: applying a non-epoxy glue sealant 105 along an outer periphery of a first substrate 102; placing a second substrate 101 onto the first substrate containing the non-epoxy glue sealant; and irradiating the glue sealant with laser beam radiation to polymerize the sealant by directing light onto the second substrate that is at least partially transparent to the laser beam, the laser beam consisting

Art Unit: 2815

of one of a pulsed laser with a pulse duration of 1000 ns (col. 4, lines 64-67). Regarding claim 6, Glowntia also discloses a continuous (CW) laser can be used (col. 5, line 65 – col. 6, line 1). Note that Glowntia discloses the sealant is predeposited on one of the substrates (col. 4, lines 28 and 29). Therefore, Glowntia inherently discloses applying the glue sealant on a first substrate and placing a second substrate on the first substrate.

Regarding claim 2, Glowntia discloses the step of irradiation the glue sealant 105 includes irradiating the glue sealant with laser beam radiation to polymerize the sealant by activating photoinitiators (col. 2, lines 45-54).

Regarding claim 3, Figure 3 of Glowntia discloses the laser beam radiation subtends an angle substantially normal to the second substrate 101, the laser beam radiation passing through the second substrate onto the non-epoxy glue sealant 105.

Regarding claim 4, Figures 1A-3 of Glowntia disclose a method for affixing two substrates (101 and 102) to one another using a non-epoxy glue sealant 105 containing photoinitiators (col. 2, lines 45-54 and col. 4, lines 59-64), the method comprising the steps of: applying a non-epoxy glue sealant 105 along an outer periphery of a first substrate 102; placing a second substrate 101 onto the first substrate containing the non-epoxy glue sealant; and irradiating the glue sealant with laser beam radiation to polymerize the sealant by directing light onto the second substrate that is at least partially transparent to the laser beam, wherein the step of irradiating the glue sealant includes irradiating the glue sealant with laser beam irradiation that is incident onto the second substrate, so that the laser beam subtends an angle at non-normal incidence (Figure 3) with respect to the second substrate, enabling the laser directed onto the second substrate to pass through onto the non-epoxy glue sealant. Note that Glowntia discloses

Art Unit: 2815

the sealant is predeposited on one of the substrates (col. 4, lines 28 and 29). Therefore, Glownia inherently discloses applying the glue sealant on a first substrate and placing a second substrate on the first substrate.

Regarding claim 8, Glownia discloses using a wavelength of 524 nm (col. 5, lines 10-15).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inou.

In regards to claim 1, Figures 1(b)-6 disclose a method for affixing two substrates, the method comprising the steps of: applying a non-epoxy glue sealant 8 (column 5, lines 58-61) along an outer periphery of a first substrate 5; placing a second substrate 4 onto the first substrate containing the non-epoxy glue sealant; and irradiating the glue sealant with laser beam radiation 12 to polymerize the sealant (column 6, lines 27-30) by directing light onto the first substrate that is at least partially transparent to the laser beam. The difference between Inou and the claimed invention is the pulsed laser having a pulse duration less than 19 ns. Inou discloses the pulsed laser has a pulse duration up to 20ns (col. 6, line 42). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Inou by selecting a pulse duration slightly greater than 21 ns, since it has been held that where the general

Art Unit: 2815

conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233. Generally differences in parameters, such as time, will not support patentability of subject matter encompassed by the prior art, unless there is evidence indicating that such parameter is critical. In the instant case, the prior art teaches a maximum time of 20 ns, and Applicant's lower limit, 21 ns, is deemed to be within an obvious range. Note that Applicant has not established the criticality of having a pulse duration greater than 21 ns versus having a duration of 20 ns.

In regards to claim 2, Inou discloses the step of irradiating the glue sealant 8 includes irradiating the glue sealant with laser beam radiation to polymerize the sealant by activating the photoinitiators (column 6, lines 27-30). It is inherent that a sealant which undergoes photopolymerization when exposed laser radiation comprises at least some type of photoinitiator, and that this photoinitiator is activated when exposed to the radiation.

In regards to claim 3, Figure 1b of Inou discloses the step of irradiating the glue sealant 8 includes irradiating the glue sealant with laser beam radiation 12 that is incident onto the first substrate 5, so that the laser beam radiation subtends an angle substantially normal to the first substrate receiving the laser beam irradiation, the beam irradiation passing through the first or the second substrate onto the non-epoxy glue sealant.

#### ***Allowable Subject Matter***

Claim 14 would be allowable if rewritten to overcome the claim objection set forth in this Office action.

Claims 17-23 are allowed.

Art Unit: 2815

The following is an examiner's statement of reasons for allowance:

Regarding claims 14, 18, 20, and 23, the prior art of record, either singularly or in combination, does not disclose or suggest the combination of limitations including wherein the irradiating of the non-epoxy glue sealant with the laser beam includes providing a UV (Ultraviolet) dosage into the non-epoxy glue sealant within the LCD panel of not less than 0.02 J/cm<sup>2</sup>.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Response to Arguments***

Applicant's arguments filed May 3, 2005 have been fully considered but they are not persuasive.

In response to Applicant's arguments that the amendment was fully supported by the amendment, the Examiner maintains the position that the narrow range now claimed ("with a pulse duration greater than 21 ns") was not supported by the specification. The range recited in the specification was too broad to provide support for the narrow range including the specific value of 21 ns. There are no specific examples cited in the specification that gave any indication that this specific range was considered at the time of invention. Simply because the claimed range is a subset of the previously disclosed broad range, does not inherently mean the narrow



Art Unit: 2815

claimed range has support. There must be some indication that the narrow range was considered at the time of invention, not just after reviewing the relevant art cited by the examiner.

Applicant argues that Glownia fails to teach the claimed limitations of “applying a non-epoxy glue sealant along an outer periphery of a first substrate” and “placing a second substrate onto the first substrate containing the non-epoxy glue sealant”. As stated in the above rejection, Glownia discloses the glue sealant is predeposited on a periphery of one of the substrates. Glownia also discloses affixing the two substrates using the glue sealant. Since the two substrates are joined using the sealant, it is inherent that the sealant is first applied to at least one of the substrates before they are joined. It is not clear exactly what part of the above limitations Applicant feels Glownia does not disclose.

In response to Applicant’s arguments regarding the rejection of claim 1 that “the purpose and intent of the Inou invention is to not exceed 20 ns”, as indicated in the above rejection, the claimed value of greater than 21 ns is within an obvious range in light of that disclosed by Inou. While Inou does teach an upper limit of 20 ns, the reference does not specifically set forth any specific reason why 20 ns is a critical amount of time, nor does Inou disclose that the invention absolutely will not function with a value greater than 20ns. Inou is merely concerned with having a very short pulse duration. Therefore, the disclosure of Inou does not “teach away” from the proposed modification. Clearly, the difference between 20 ns and a value slightly greater than 21 ns is miniscule and would have no perceptible impact on process speed. This 1 ns difference is well within the confines of what the ordinary artisan would consider an obvious range.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew C. Landau whose telephone number is (571) 272-1731.

The examiner can normally be reached from 8:30 AM - 5:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Thomas can be reached on (571) 272-1664. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

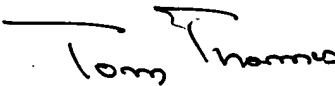
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private or Public PAIR. Status information for unpublished

Art Unit: 2815

applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should any questions arise regarding access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Matthew C. Landau

Examiner

  
TOM THOMAS  
SUPERVISORY PATENT EXAMINER

June 28, 2005